CLAIMS

1. (previously presented) A network communication system, comprising:

A first device having a first data bandwidth requirement, said first device configured to transmit and receive data at different data rates;

a second device having a second data bandwidth requirement; said second device configured to transmit and receive data at different rates and configured to communicate with said first device; and

a master transceiver configured to manage data communications between said first device and said second device by assigning a variable length data slot based on the first device and the second device bandwidth requirements;

wherein said communications between said first device and said second device is configured to operate in an ultra wide band environment.

2. (Original) The network communication system of claim 1, wherein said communication between said first device and said second device is configured to be performed in a wireless environment.

3. (Original) The network communication system of claim 1, wherein said transmitted and received data rates between said first and said second device varies as a function of noise or reflection.

4. (Canceled)

5. (previously presented) A network communication system, comprising:

a first slave transceiver configured to communicate a plurality of TDMA data packets at different data rates;

a second slave transceiver configured to communicate a plurality of TDMA data packets at different data rates to said first slave transceiver; and

a master transceiver configured to manage data communications between said first slave transceiver and said second slave transceiver by assigning a variable length data slot within each of the plurality of TDMA data packets;

wherein said communication between said first slave transceiver and said second slave transceiver is configured to operate in an ultra wide band environment.

6. (Original) The network communication system as recited in claim 5, wherein said master transceiver is further configured to synchronize communications between said first slave transceiver and said second slave transceiver.

7. (Original) The network communication system as recited in claim 5, further comprising a third transceiver in communications with said master transceiver, said third transceiver configured to communicate a plurality of TDMA data packets at different data rates.

8. (Original) The network communication system as recited in claim 5, wherein said communication between said first slave transceiver and said second slave transceiver is configured to be performed in a wireless environment.

9. (Original) The network communication system as recited in claim 5, wherein said plurality of TDMA data packet communication between said first slave transceiver and said second slave transceiver varies as a function of noise or reflection.

10. (Canceled)

11. (Original) A master transceiver configured to transmit ultra wide base band pulses, comprising:

at least one slave transceiver in communication with the master transceiver;

and

a framing control unit housed by said master transceiver, said framing control unit configured to generate and maintain a plurality of TDMA frames, each of said plurality of TDMA frames having a plurality of slots, each of said plurality of slots having a start of frame slot, said start of frame slot configured to identify each of said plurality of TDMA frames to said at least one slave transceiver.

12. (Original) The master transceiver recited in claim 11, further comprising a Medium Access Control protocol in communication with said framing control unit, said Medium Access Control protocol configured to define each of said plurality of TDMA frames.

13. (Original) The master transceiver recited in claim 11, wherein said communications between said master transceiver and said at least one slave transceiver is configured to provide for isochronous data communications.

14. (Original) The master transceiver recited in claim 11, wherein said communications between said master transceiver and said at least one slave transceiver is configured to provide for asynchronous data communications.

15. (Original) The master transceiver recited in claim 11, wherein said start of frame slot generated by said master transceiver further comprises a synchronization slot configured to synchronize communications between said master transceiver and said at least one slave transceiver.

16. (Original) The master transceiver recited in claim 15, wherein said start of frame slot generated by said master transceiver further comprises a timestamp slot which is configured to permit said master transceiver to modify each of said plurality of TDMA frames at a predetermined time interval.

17. (Original) A transceiver, comprising:

a data modulation unit configured to generate a plurality of signals having variable pulse repetition frequencies and different modulation techniques;

a transmitter coupled to said data modulation unit, said transmitter configured to generate a pulse stream according to said data modulation unit;

an antenna coupled to said transmitter, said antenna configured to transmit a plurality of ultra wide band base band signals; and

a receiver configured to detect and demodulate said ultra wide band base band signals.

18. (Original) The transceiver recited in claim 17, wherein said data modulation unit comprises a pulse repetition frequency module configured to permit varying pulse repetition frequencies to be transmitted.

19. (Original) The transceiver recited in claim 17, wherein said data modulation unit comprises a transmit module configured to generate said plurality of signals which are communicated to said transmitter.

20. (Original) The transceiver recited in claim 19, wherein said transmit module is configured to modulate signals for different modulation techniques.

21. (Original) The transceiver recited in claim 17, where said transmitter further comprises a pulse generator system configured to generate a plurality of pull-up signals and a plurality of pull-down signals.

22. (Original) The transceiver recited in claim 21, wherein said transmitter further comprises a transistor drive system, said transistor drive system configured to communicate said plurality of pull-up signals and said plurality of pull-down signals to said antenna.

23. (Original) The transceiver recited in claim 17, wherein said receiver further comprises a front end configured to receive and amplify said ultra wide band base band signal generated by said transmitting antenna.

24. (Original) The transceiver recited in claim 23, wherein said receiver further comprises a pulse detection unit coupled to said front end, said pulse detection unit configured to detect a plurality of pulse detection pulses from said received and amplified ultra wide band base band signals.

25. (Original) The transceiver recited in claim 24, wherein said receiver further comprises a data processing unit coupled to said pulse detection unit, said data processing unit configured to retrieve a plurality of data from said plurality of pulse detection pulses.

26. (previously presented) The transceiver recited in claim 25, wherein said data processing unit further comprises a divider circuit housed within said data processing unit, said divider circuit configured to provide the pulse repetition frequency for sampling by said data processing unit.

27. (Original) The transceiver recited in claim 25, wherein said data processing unit further comprises a decoder housed within said data processing unit, said decoder configured to detect different modulation techniques.

28. (previously presented) An ultra wide band communication system, comprising:

a first ultra wide band device having a first data bandwidth requirement, and configured to transmit and receive data at different data rates;

a second ultra wide band device having a second data bandwidth requirement, and configured to transmit and receive data at different rates and configured to communicate with the first device; and

a master transceiver configured to manage data communications between the first ultra wide band device and the second ultra wide band device.

29. (previously presented) The ultra wide band communication system of claim 28, wherein the communication between the first ultra wide band device and the second ultra wide band device is performed in a wireless environment.

30. (previously presented) The ultra wide band communication system of claim 28, wherein the first device, second device and the master transceiver vary an ultra wide band pulse repetition frequency as a function of a signal-to-noise ratio.

31. (previously presented) The ultra wide band communication system of claim 28, wherein the first device, second device and the master transceiver vary an ultra wide band pulse repetition frequency as a function of a bit error rate.

32. (previously presented) An ultra wide band communication system, comprising:

a first ultra wide band slave transceiver configured to communicate a plurality of TDMA data packets at different data rates;

a second ultra wide band slave transceiver configured to communicate a plurality of TDMA data packets at different data rates than the first slave transceiver; and

a master transceiver configured to manage communication between the first ultra wide band slave transceiver and the second ultra wide band slave transceiver.

33. (previously presented) The ultra wide band communication system of claim 32, wherein the master transceiver synchronizes communication between the first slave transceiver and the second slave transceiver.

34. (previously presented) The ultra wide band communication system of claim 32, wherein communication between the first slave transceiver and the second slave transceiver is performed in a wireless environment.

35. (previously presented) The ultra wide band communication system of claim 32, wherein a transmission rate of the plurality of TDMA data packets varies as a function of a signal-to-noise ratio.

36. (previously presented) The ultra wide band communication system of claim 32, wherein a transmission rate of the plurality of TDMA data packets varies as a function of a bit error rate.